Sensory aids for the blind: A challenging problem with lessons for the future
The purpose of this review is to synthesize current haptic wearable research for clinical applications involving sensory impairments. We

emerge which, if heeded, could greatly improve the effectiveness of sensory-aids research by providing

resolution. Finally, an examination of the organization of research and funding reveals that the U.S. program is

of complexity and high cost. Several mobility aids designed to augment the cane or guide dog have recently been

and their use promises to be easier to learn than direct-translation machines, but at the penalty

reading rate. But if these devices are ever to have the opportunity of reaching the blind public, then mechanisms for

evaluation, field trials, manufacture, and deployment must be set up. The field of currently active sensory-aids

research programs is reviewed. Several programs are concerned with increasing the convenience and accessibility

of braille by the application of computer technology. Nevertheless, despite the unquestionable value of these

developments, the usefulness of braille is limited by its bulk, its cost, and the transcription time. To provide direct

access to printed documents several devices are being developed that transform optical images from a printed

page into auditory or tactile displays requiring motivation and training for effective use. These machines are termed

"direct-translation" units and are designed for simplicity and low cost. Other systems utilize print recognition

techniques to create a reading machine providing braille or speech as an output. These machines offer potentially

faster reading rates and their use promises to be easier to learn than direct-translation machines, but at the penalty

of complexity and high cost. Several mobility aids designed to augment the cane or guide dog have recently been

developed. These are also described. The prospects of achieving direct input to the visual cortex are discussed. It

is apparent that the cost of this research is likely to be extremely high in relation to the size of the blind population

which might ultimately benefit. Somewhat more easily realizable is a visual substitution system involving

stimulation of an area of the skin. Several systems are being developed but all suffer from limitations in image

resolution. Finally, an examination of the organization of research and funding reveals that the U.S. program is

small, poorly coordinated, and contains some seemingly unnecessary duplication of effort. Several obvious lessons

emerge which, if heeded, could greatly improve the effectiveness of sensory-aids research by providing

development, manufacture, evaluation, and deployment services within an integrated program.
define haptic wearables as untethered, ungrounded body worn devices that interact with skin directly or through clothing and can be used in natural environments outside a laboratory. Results of this review are categorized by degree of sensory impairment. Abstract. Sensory impairments decrease quality of life and can slow or hinder rehabilitation. Small, computationally powerful electronics have enabled the recent development of wearable systems aimed to improve function for individuals with sensory impairments. The purpose of this review is to synthesize current haptic wearable research for clinical applications involving sensory impairments. The following case study is written by Irina Germanova Sumarokova, director of Nizhniy Novgorod Regional Charity of Parents of Visually Impaired “Perspektiva.” Establish a model of early intervention center for providing permanent medical, social psychological and pedagogic services for families with blind or visually impaired children in Nizhniy Novgorod Irina Germanovna Sumarokova Director Nizhniy Novgorod… Now days the number of blind and visually impaired children is increasingly growing. The situation is worsened by fact, that last few years as a result of medical successes in nursing of premature newborn children a number of multi-disabled children with blindness increased too. Creating an inclusive learning experience for English language learners with specific needs: Case studies from around the British Council’s global network. www.teachingenglish.org.uk. Contents. Case studies sensory and physical needs 17. Case study 7. Khalid – Physical impairment 18 Case study 8. Eman – Hearing impairment 19 Case study 9. Mariam – Hearing impairment 20 Case study 10. Juan – Hearing impairment 21 Case study 11. The British Council is committed to providing its learners with a structured English language learning experience that will support each individual in the process of reaching their full potential in language learning.